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May 24, 2024

Department of Defense  
OFFICE OF PREPUBLICATION AND SECURITY REVIEW

# **Modernized Selected Acquisition Report (MSAR)**

## **LGM-35A Sentinel (LGM-35A Sentinel)**

FY 2025 President's Budget

Effective: December 31, 2023

Defense Acquisition Visibility Environment

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**(U) Common DoD Abbreviations**

\$B	Billions of Dollars
\$K	Thousands of Dollars
\$M	Millions of Dollars
ACAT	Acquisition Category
Acq O&M	Acquisition-Related Operations and Maintenance
ADM	Acquisition Decision Memorandum
APA	Additional Performance Attribute
APB	Acquisition Program Baseline
APPN	Appropriation
APUC	Average Procurement Unit Cost
BA	Budget Authority or Budget Activity
Blk	Block
BY	Base Year
CAE	Component Acquisition Executive
CAPE	Cost Assessment and Program Evaluation
CARD	Cost Analysis Requirements Description
CCE	Component Cost Estimate
CCP	Component Cost Position
CDD	Capability Development Document
CLIN	Contract Line Item Number
CPD	Capability Production Document
CY	Calendar Year or Constant Year
DAB	Defense Acquisition Board
DAE	Defense Acquisition Executive
DAES	Defense Acquisition Executive Summary
DAVE	Defense Acquisition Visibility Environment
DoD	Department of Defense
DSN	Defense Switched Network
EMD	Engineering and Manufacturing Development
EVM	Earned Value Management
FD	Full Deployment
FDD	Full-Deployment Decision
FMS	Foreign Military Sales
FOC	Full Operational Capability
FRP	Full-Rate Production
FY	Fiscal Year
FYDP	Future Years Defense Program
ICD	Initial Capabilities Document
ICE	Independent Cost Estimate
Inc	Increment
IOC	Initial Operational Capability
IT	Information Technology
JROC	Joint Requirements Oversight Council
KPP	Key Performance Parameter
KSA	Key System Attribute

LRIP	Low-Rate Initial Production
MDA	Milestone Decision Authority
MDAP	Major Defense Acquisition Program
MILCON	Military Construction
N/A	Not Applicable
O	Objective
O&M	Operations and Maintenance
O&S	Operating and Support
ORD	Operational Requirements Document
OSD	Office of the Secretary of Defense
PAUC	Program Acquisition Unit Cost
PB	President's Budget
PE	Program Element
PEO	Program Executive Officer
PM	Program Manager
POE	Program Office Estimate
R&MF	Revolving and Management Funds
RDT&E	Research, Development, Test, and Evaluation
SAR	Selected Acquisition Report
SCP	Service Cost Position
T	Threshold
TBD	To Be Determined
TY	Then Year
U.S.	United States
U.S.C	United States Code
UCR	Unit Cost Reporting
USD(A&S)	Under Secretary of Defense (Acquisition and Sustainment)

**(U) Program Description**

<b>Full Name</b> LGM-35A Sentinel	<b>Short Name</b> LGM-35A Sentinel
<b>PNO</b> 493	<b>Milestone Decision Authority</b> Defense Acquisition Executive
<b>Lead Component</b> Department of the Air Force	<b>Program Executive Office</b> Air Force Program Executive Officer/ Intercontinental Ballistic Missiles
<b>Joint Program</b> No	<b>Acquisition Type</b> Major Defense Acquisition Program
<b>Adaptive Acquisition Pathway</b> Major Capability Acquisition	<b>Acquired Systems</b> GBSD
<b>Acquisition Category</b> ID	
<b>Acquisition Status</b> Active Acquisition	

**Mission**

The Sentinel program will design, develop, produce and deploy a replacement for the current Minuteman III (MM III) Intercontinental Ballistic Missile (ICBM) weapon system. The Sentinel program, previously known as the Ground Based Strategic Deterrent (GBSD), will deliver a fully integrated weapon system to close key capability gaps and vulnerabilities identified in the GBSD capabilities Based Assessment, Sentinel Capabilities Development Document, and the GBSD Analysis of Alternatives. GBSD will also mitigate ground-based deterrent degradation due to MM III component age-out and attrition. The GBSD program will include prime contractor development of applicable support equipment, data, flight test hardware and infrastructure, and training material while examining and mitigating risk during the MM III to GBSD transition. This program includes any needed nuclear surety and certification and system vulnerability assessments. The major activities in the GBSD program include 1) government system engineering, analytics, and test capability development; 2) air vehicle equipment risk reduction; 3) command & launch risk reduction; 4) launch systems risk reduction; and 5) weapon system integration risk reduction. Government systems engineering investments include development of a model based systems engineering (MBSE), integration, test software, product life-cycle management framework, and modernization of existing system engineering labs and infrastructure. Air vehicle equipment is an integrated missile stack which includes the propulsion, post boost, guidance, and re-entry systems sub-components. Command & launch encompasses all command and control components and interfaces, associated ground hardware, ground control equipment and associated software directly related to the survivability, monitoring, and launch of the replacement flight system. Launch systems include launch control center, launch facility restoration, modernization of real property, and structures and associated ground mechanical systems. Weapon system integration risk reduction includes non-proprietary open systems architecture with well-defined interfaces and a modular design at the weapon system level to allow future modification and technology insertion. Major sub-system support

systems include operator and maintenance trainer hardware and software, security system architecture, and transport support equipment.

**(U) Responsible Office****Program Executive Officer**

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## (U) Executive Summary

### Program Highlights Since Last Report

The LGM-35A Sentinel Systems Program Office (SPO) is progressing through the engineering and manufacturing development phase. The Northrop Grumman Corporation (NGC) and Government teams continue to mature the design, integrate all technologies and capabilities into a single system, and prepare for weapon system manufacturing. Synchronizing Sentinel weapon system development and fielding and the associated military construction projects remains a top priority, with activities taking place across seven states and five installations. The SPO continues to be challenged by supply chain issues, parts availability, and the ability to hire qualified individuals to support Program needs.

With the additional authorities granted at the February 2023 in-progress review and updated Acquisition Strategy codified by the MDA signing of the ADM on March 27, 2023, The SPO and NGC are aligning replanning efforts. In support of the Over Target Baseline/Over Target Schedule (OTB/OTS) replanning activities, the SPO completed the Defense Contract Management Agency's 14-point assessment and qualitative assessment of Sentinel's government-managed schedules. The SPO also began a comprehensive revision of Sentinel's enterprise-encompassing Integrated Master Plan (IMP) in anticipation of NGC's IMP restructure and Integrated Master Schedule (IMS) rebuild.

Subsystem critical design reviews (CDR) will be delivered throughout FY 2024. The post-boost propulsion system will be delivered to support Flight Test-01. Multiple testing events include a simulated interface test with the Western Test Range, Stage 2 and 3 static fire test along with Stage 1, 2, and 3 subsystem CDRs, and booster modal testing for Stage 1, 2, and 3. MILCON continues for Sentinel weapon system development and testing and to support the warfighter.

On December 11, 2023, the Sentinel Program Manager submitted a signed Program Deviation Report to the Service Acquisition Executive (SAE), to notify that the Program is deviating from approved APB cost and schedule thresholds. The December 2023 POE indicated that the PAUC for the Sentinel Program had increased by greater than 25 percent over the APB threshold.

On January 18, 2024, the Under Secretary of the Air Force reported to Congress the Sentinel Program experienced cost growth beyond its initial projections, which resulted in a critical Nunn-McCurdy breach. The Program reported a Critical Unit Cost growth of at least 37% against PAUC and a Significant Unit Cost growth of at least 19% against APUC as compared to the Current APB. As required by law, the OSD is conducting a review of the Program to decide whether to certify or not. Work under the current contract will continue until the OSD review is completed, no later than July 9, 2024.

**Defense Cost and Resource Center and Cost and Software Data Reporting (CSDR) Compliance Rating:** Red. Program Office issues or long-term outstanding submissions. .

Some of this Program's Executive Summary contains Controlled Unclassified Information (CUI) and have been removed per the Implementation Plan for the DoD's Modernized Selected Acquisition Report Process, dated June 2023, which required the SAR be submitted without any



designation relation to dissemination control.

The Nunn-McCurdy Review Process is assessing whether there are significant software-related issues with the program. The Software baseline completion estimates are no longer valid with the contractors declaration of OTB/OTS. The SPO is unable to provide a realistic assessment until the replanning is complete. The SPO is working with the contractor, as part of the OTB/OTS effort, to provide the Government increased visibility and improved software forecast capabilities.

#### (U) History of Significant Developments Since Program Inception

Date	Description
September 2020	Ground Based Strategic Deterrent (GBSD) successfully awarded the EMD Contract on September 8, 2020.
September 2020	MDA approved MS B on September 4, 2020.
March 2021	Northrop Grumman Corporation (NGC) conducted an Integrated Baseline Review.
August 2021	The United States Government delivered Vandenberg Space Force Base, California Launch Facility to NGC.
September 2021	First GBSD Holloman Air Force Base (AFB), New Mexico High Speed Test Track mass-mock run.
October 2021	GBSD closed out the encryption preliminary design review with Sandia National Labs.
October 2021	Enhanced Ground Test (sled test) conducted at Holloman AFB, New Mexico.
November 2021	Program Office conducted sled test with Strategic Resonating Beam Accelerometer at Holloman AFB, New Mexico.
December 2021	GBSD delivered the updated Test and Evaluation Master Plan to OSD.
February 2023	On February 7th, 2023, the MDA, held an in-progress review of the program and approved the updated Acquisition Strategy Plan (ASP).
March 2023	The MDA signed the ADM, finalizing the updated ASP.
March 2023	On March 2nd, 2023, at Promontory, Utah, the joint NGC and Air Force Sentinel team conducted a successful static fire test of the Sentinel Stage-1 booster.
May 2023	The Sentinel Strategic Basing Decision and Record of Decision were signed for the Environmental Impact Statement.
June 2023	Post Boost Altitude Control Module Level 3 Critical Design Review (CDR) was conducted.
August 2023	Conducted the Delta Flight Test Vehicle CDR.
September 2023	Conducted the Ordnance Initiation CDR.
September 2023	Power & Distribution, Ordnance Initiation CDR was conducted.
October 2023	NGC delivered modal testing stage 1, stage 2, and stage 3 assets to Promontory, Utah and completed modal testing on the lower booster stack.
October 2023	NGC and Textron successfully accomplished a shroud fly off test at China Lake, California. This test validates the design and models of a critical portion of the weapon system delivery sequence.
December 2023	On December 11, 2023, the Sentinel Program Manager notified the Service Acquisition Executive, that the program is experiencing program deviations for both cost and schedule from the approved baseline through a signed Program Deviation Report.
January 2024	The Sentinel Program Office continues progressing through Over Target Baseline/Over Target Schedule rebaseline activities while working in concert with OSD throughout the

Date	Description
	Nunn-McCurdy review process.
January 2024	On January 12, 2024, at the Arnold Engineering Development Complex (AEDC) at Arnold AFB, Tennessee the joint NGC and Air Force Sentinel team safely conducted a successful static fire test of the Sentinel Stage 2 motor.
March 2024	On March 16, 2024, joint NGC and Air Force Sentinel teams conducted a successful Sentinel stage 3 motor static fire test at the AEDC, Arnold AFB, Tennessee. This test builds confidence in Sentinel missile performance and the test data will be integral in improving models and future design iterations.

**(U) Schedule****(U) Schedule Events**

Events		Untitled Baseline (Milestone) 9/4/2020 Objective	Untitled Baseline (Current) 9/4/2020 Objective / Threshold		Current Estimate 12/31/2023	Actual
Milestone B	MS B	Aug 2020	Aug 2020	Sept 2020	-	1 Sept 2020
System Critical Design Review (CDR)	CDR	Jul 2023	Jul 2023	Jul 2024	May 2024	-
Milestone C	MS C	May 2026	May 2026	May 2027	Jan 2026	-
Initial Operational Capability	IOC	Jun 2029	Jun 2029	Jun 2030	May 2029	-
Full Rate Production (FRP) Decision Point	Other	Sept 2029	Sept 2029	Sept 2030	Jul 2029	-

**Notes**

The LGM-35A Sentinel Program has not adjusted its APB thresholds since Sentinel entered the EMD phase in FY 2020. The current estimates are under review as part of the Over Target Baseline/Over Target Schedule and Nunn-McCurdy Review Process.

**Schedule Baseline Deviation Explanation**

None

**(U) Current Significant Schedule Risks and Risks Identified at Milestones/Decisions**

Event	Date	Description
Current	12/31/2023	This Program's Significant Schedule Risks contains Controlled Unclassified Information (CUI) and have been removed per the Implementation Plan for the DoD's Modernized Selected Acquisition Report Process, dated June 2023, which required the SAR be submitted without any designation relation to dissemination control.

**(U) Performance**

*Additional information for this section is provided in the classified annex to this submission.*

**(U) Performance Attributes**

No Data

**(U) Requirement Source:**

Sponsor(s): United States Air Force

1. Capability Development Document, *GBSD Capabilities Design Document*

Validated By: , June 18, 2019

Notes: GBSD Capabilities Design Document (CD0) June 18, 2019

**Notes**

None

**Performance Deviation Explanation**

None

## (U) Acquisition Budget Estimate

### (U) Total Acquisition Estimates and Quantities

Category (\$M) Base Year: 2020	(Milestone) 9/4/2020 CY\$ obs Objective	(Current) 9/4/2020 CY\$ obs Objective / Threshold	Current Estimate PB 2025 CY\$ obs / TY\$ obs
RDT&E	22,978.0	22,978.0 25,275.8	28,893.6* 36,001.0
Procurement	47,858.4	47,858.4 52,644.2	57,665.4* 86,355.0
MILCON	6,904.3	6,904.3 7,594.7	18,950.1* 28,705.0
O&M	0.0	0.0 0.0	917.8* 1,352.0
Total Acquisition	77,740.7	77,740.7 -	106,426.9 152,413.0
Program Acquisition Unit Cost	117.968	117.968 129.765	161.498* 231.279
Average Procurement Unit Cost	75.486	75.486 83.035	90.955* 136.207
Program End-Item Quantity			
Development	25	25	25
Procurement	634	634	634
O&M-Acquired	-	-	0

\* Baseline Deviation

### Budget Notes

Under significant cost and schedule pressures, as intoned by the AFCAA FY 2025 estimate, the LGM-35A Sentinel Program Office initiated a deep dive of schedule impacts and outyear MILCON/ Procurement cost based on EMD design maturation. As a result, a PDR dated December 11, 2023 was submitted declaring a critical unit cost breach. The Under Secretary of the Air Force documented the Service determination confirming a Program Breach invoking the Nunn-McCurdy process on January 18, 2024.

### Quantity Notes

None

### Cost Baseline Deviation Explanation

Parameter	Explanation
Acquisition Cost (RDT&E)	The Breach to APB Cost and Unit Cost is caused by the combination of the prior year, budget year, FYDP (constrained by FY 2025 PB) and the FY 2023 POE. The POE, which is believed to be a more realistic estimate of the true cost of the Program required the Program Office submit a Program Deviation Report (PDR) dated December 11, 2023. This PDR declared various APB threshold deviations and a critical unit cost breach. The Under Secretary of the Air Force documented the Service determination confirming a Program Breach invoking the Nunn-McCurdy process on January 18, 2024.

Parameter	Explanation
Acquisition Cost (Procurement)	The Breach to APB Cost and Unit Cost is caused by the combination of the prior year, budget year, FYDP (constrained by FY 2025 PB) and the FY 2023 POE. The POE, which is believed to be a more realistic estimate of the true cost of the Program required the Program Office submit a PDR dated December 11, 2023. This PDR declared various APB threshold deviations and a critical unit cost breach. The Under Secretary of the Air Force documented the Service determination confirming a Program Breach invoking the Nunn-McCurdy process on January 18, 2024.
Acquisition Cost (MILCON)	The Breach to APB Cost and Unit Cost is caused by the combination of the prior year, budget year, FYDP (constrained by FY 2025 PB) and the FY 2023 POE. The POE, which is believed to be a more realistic estimate of the true cost of the Program required the Program Office submit a PDR dated December 11, 2023. This PDR declared various APB threshold deviations and a critical unit cost breach. The Under Secretary of the Air Force documented the Service determination confirming a Program Breach invoking the Nunn-McCurdy process on January 18, 2024.
Acquisition Cost (O&M)	The Breach to APB Cost and Unit Cost is caused by the combination of the prior year, budget year, FYDP (constrained by FY 2025 PB) and the FY 2023 POE. The POE, which is believed to be a more realistic estimate of the true cost of the Program required the Program Office submit a PDR dated December 11, 2023. This PDR declared various APB threshold deviations and a critical unit cost breach. The Under Secretary of the Air Force documented the Service determination confirming a Program Breach invoking the Nunn-McCurdy process on January 18, 2024.
Program Acquisition Unit Cost	The Breach to APB Cost and Unit Cost is caused by the combination of the prior year, budget year, FYDP (constrained by FY 2025 PB) and the FY 2023 POE. The POE, which is believed to be a more realistic estimate of the true cost of the Program required the Program Office submit a Program Deviation Report (PDR) dated December 11, 2023. This PDR declared various APB threshold deviations and a critical unit cost breach. The Under Secretary of the Air Force documented the Service determination confirming a Program Breach invoking the Nunn-McCurdy process on January 18, 2024.
Average Procurement Unit Cost	The Breach to APB Cost and Unit Cost is caused by the combination of the prior year, budget year, FYDP (constrained by FY 2025 PB) and the FY 2023 POE. The POE, which is believed to be a more realistic estimate of the true cost of the Program required the Program Office submit a PDR dated December 11, 2023. This PDR declared various APB threshold deviations and a critical unit cost breach. The Under Secretary of the Air Force documented the Service determination confirming a Program Breach invoking the Nunn-McCurdy process on January 18, 2024.

### (U) Risk and Sensitivity Analysis

Current Procurement Estimate Risks (12/31/2023)	
1	This Program's Procurement Cost Risks and Sensitivity Analysis contains Controlled Unclassified Information (CUI) and have been removed per the Implementation Plan for the DoD's Modernized Selected Acquisition Report Process, dated June 2023, which required the SAR be submitted without any designation relation to dissemination control
Current Baseline Risks (9/4/2020)	
95.8.	
Revised Original Baseline Risks (9/4/2020)	

95.8.

## (U) Unit Costs

### (U) Current Estimate Compared with Current Baseline

Category (CY\$M) Base Year: 2020	Current Baseline 09/04/2020	Current Estimate PB 2025	% Change
Program Acquisition Unit Cost			
Acquisition Cost	77,740.7	106,426.9	
Program Quantity	659	659	
PAUC	117.968	161.498	36.90%
Average Procurement Unit Cost			
Procurement Cost	47,858.4	57,665.4	
Procurement Quantity	634	634	
APUC	75.486	90.955	20.49%

**Critical Cost Growth**

**Significant Cost Growth**

### (U) Current Estimate Compared with Original Baseline

Category (CY\$M) Base Year: 2020	Original Baseline 09/04/2020	Current Estimate PB 2025	% Change
Program Acquisition Unit Cost			
Acquisition Cost	77,740.7	106,426.9	
Program Quantity	659	659	
PAUC	117.968	161.498	36.90%
Average Procurement Unit Cost			
Procurement Cost	47,858.4	57,665.4	
Procurement Quantity	634	634	
APUC	75.486	90.955	20.49%

**Significant Cost Growth**

### (U) Critical Cost Growth Details

#### Current Baseline PAUC Breach Explanation

The Breach to APB Cost and Unit Cost is caused by the combination of the prior year, budget year, FYDP (constrained by FY 2025 PB) and the FY 2023 POE. The POE, which is believed to be a more realistic estimate of the true cost of the Program required the Program Office submit a PDR dated December 11, 2023. This PDR declared various APB threshold deviations and a critical unit cost breach. The Under Secretary of the Air Force documented the Service determination confirming a Program Breach invoking the Nunn-McCurdy process on January 18, 2024.

#### Current Baseline APUC Breach Explanation

The Breach to APB Cost and Unit Cost is caused by the combination of the prior year, budget year, FYDP (constrained by FY 2025 PB) and the FY 2023 POE. The POE, which is believed to be a more realistic estimate of the true cost of the Program required the Program Office submit a Program Deviation Report (PDR) dated December 11, 2023. This PDR declared various APB threshold deviations and a critical unit cost breach. The Under Secretary of the Air Force documented the Service determination confirming a Program Breach invoking the Nunn-McCurdy process on January 18, 2024.



**Original Baseline PAUC Breach Explanation**

The Breach to APB Cost and Unit Cost is caused by the combination of the prior year, budget year, FYDP (constrained by FY 2025 PB) and the FY 2023 POE. The POE, which is believed to be a more realistic estimate of the true cost of the Program required the Program Office submit a PDR dated December 11, 2023. This PDR declared various APB threshold deviations and a critical unit cost breach. The Under Secretary of the Air Force documented the Service determination confirming a Program Breach invoking the Nunn-McCurdy process on January 18, 2024.

**Impacts of Schedule Changes on Unit Cost**

The Program Office is acknowledging a potential schedule extension of at least two years beyond its APB threshold. However, the Prime is undergoing an Over Target Baseline (OTB)/Over Target Schedule (OTS) effort with only preliminary results. A PDR spurred Nunn-McCurdy actions will likely result in upward adjustments to the unit cost.

**Impacts of Performance Changes on Unit Cost**

The Program's Prime Contractor is undergoing an OTB/OTS effort with only preliminary results. A PDR spurred Nunn-McCurdy actions will likely result in upward adjustments to the unit cost.

**Actions taken or Proposed to Control Future Cost Growth**

The results from the Nunn-McCurdy review process will determine further actions.

**Status of Each Major Contract and Significant Factors Contributing to Cost and Schedule Variance; Projected Effects on Future Program Costs**

See Contracts section.

**Notes**

Under significant cost and schedule pressures, as intoned by the AFCAA FY 2025 estimate, the LGM-35A Sentinel Program Office initiated a deep dive of schedule impacts and outyear MILCON/Procurement cost based on EMD design maturation. As a result, a PDR dated December 11, 2023 was submitted declaring a critical unit cost breach. The Under Secretary of the Air Force documented the Service determination confirming a Program Breach invoking the Nunn-McCurdy process on January 18, 2024. The application of the FY 2025 PB indices (not available during the time of the PDR creation and notification letter transmission) slightly changed the original values documented in the PDR. The PAUC unit cost growth changed from 37% to 36.9% and the APUC unit cost growth changed from 19% to 20.49%; the previously identified Unit Cost threshold breaches persist with these new percentages.

**(U) Life-Cycle Costs****(U) Operating and Support and Disposal Cost Estimates Compared with Baseline**

Category (\$M) Base Year: 2020	(Milestone) 9/4/2020 CY\$ obs Objective	(Current) 9/4/2020 CY\$ obs Objective / Threshold	Current Estimate CY\$ obs / TY\$ obs	
Total O&S	84,598.0	84,598.0	93,057.8	-
Total Disposal	-	-	-	-

**(U) Current Cost Estimate Sources**

None

**Operating and Support Baseline Deviation Explanation**

None

**Cost Notes**

This Program's Operating and Support Costs contains Controlled Unclassified Information (CUI) and has been removed per the Implementation Plan for the DoD's Modernized Selected Acquisition Report Process, dated June 2023, which required the MSAR be submitted without any designation relation to dissemination control.

**O&S and Disposal Cost Sources:** This Program's O&S Cost is CUI and has been redacted however, the O&S Cost Source and Disposal Cost Source listed in the MSAR above not CUI but are inaccurate due to a system limitation. See MSAR Supplement for corrected source(s).

**O&S and Disposal Cost Sources:** For Programs with an O&S Cost estimate or Disposal Cost estimate the O&S Cost Source and Disposal Cost Source listed in the MSAR are inaccurate due to a system limitation. See MSAR Supplement for corrected source(s).

**(U) Operating and Support Variance with Prior Estimate**

No Data

**(U) Operating and Support Cost Element Structure Estimates by Acquired System**

No Data

**(U) Annual Operating and Support Costs per Unit Compared with Antecedent System**

No Data

**(U) Operating and Support Cost Estimate Assumptions**

No Data

**Additional O&S Estimate Assumptions**

None

**Antecedent Estimate Assumptions**

O&S Costs captured from FY1999 to FY2023. MMIII completed Sustainment Review with AFCAA in 2023.

**O&S Annual Cost Calculation Memo**

None

## (U) Technologies and Systems Engineering

### (U) Current Significant Technical Risks and Risks Identified at Milestones/Decisions

Event	Date	Description
Current	12/31/2023	This Program's Significant Technical Risks contains Controlled Unclassified Information (CUI) and have been removed per the Implementation Plan for the DoD's Modernized Selected Acquisition Report Process, dated June 2023, which required the SAR be submitted without any designation relation to dissemination control.

**(U) Performing Activities and Contracts****(U) External Government Activities**

None

**(U) Contracts and Efforts**

Contract Title	Contract Number / Effort	Contractor	Phase
FA8219-20-C-0006	FA821920C0006	NORTHROP GRUMMAN SYSTEMS CORP	Development

**(U) Contract and Effort Identification, Price, Quantity and Performance**

<b>Contract Number:</b>	FA821920C0006	<b>Order Number:</b>	-
<b>Contract Title:</b>	FA8219-20-C-0006	<b>Strategy:</b>	FAR 15: Negotiated Contracts
<b>CAGE:</b>	8MQW5 - NORTHROP GRUMMAN SYSTEMS CORP	<b>Contracting Office:</b>	DOD - Department of Defense
<b>City, State/Province:</b>	ROY, UT		

<b>Effort Number:</b>	-	<b>Supported Phase:</b>	Development
<b>Type:</b>	Multiple Types	<b>Award Date:</b>	September 8, 2020
<b>Latest Modification Date:</b>	-	<b>Definitization Date:</b>	September 8, 2020
<b>Latest Modification No.:</b>	P00039	<b>Work Start Date:</b>	September 8, 2020
<b>Technical Data Rights:</b>	-		

**Notes:** The SPO and NGC are aligning replanning efforts; therefore the PM Estimated Price at Completion is under review. Design, develop, model, integrate, test, verify, validate, deliver, and document the GBSD WS. Design, build, deliver, and maintain a Digital Engineering Environment.

**Target Price Change Explanation**

The difference between the Original Target Price and the Current Target Price is based on the negotiated addition of in-scope requirements to the contract. These contract modifications support progress of Sentinel development and minimize requirement gaps identified during performance.

**General Variance Explanation**

The Prime contractor continues to work through OTB/OTS re-baselining efforts. During this time, the Program office is receiving tailored Integrated Program Management Data Analysis Report reporting which focuses on the actuals; forecasts are updated for in-progress tasks only. As a result of tailored reporting, the EVM metrics may not be fully representative of Program performance.

Initial Price (TY\$M) Target / Ceiling	Current Price (TY\$M) Target / Ceiling	Estimate at Completion (TY\$M) Contractor / PM	Initial Quantity	Current Quantity	Delivered Quantity
13,293.6 -	13,316.3 -	15,746.9 17,753.2	-	-	-

**Work Completed (%):** 36.49%

**Cost Variance (TY\$M):** -1,005.6

**Schedule Variance (TY\$M):** -945.0

#### **Factors Contributing to Cost Variance and Projected Effects on Program Costs**

Due to the unfavorable Cost Variance trend, the Prime initiated a request for an over target baseline/over target schedule process in April 2023. During the re-baselining efforts (starting in 05/2023), the Government granted tailored reporting against the Integrated Program Management Data and Analysis Report Contract Data Requirements List deliverable. The Prime's earned value forecasts are limited to in-progress tasks only, and the focus is on actual costs; therefore, the EVM metrics being reported may not be fully indicative of Program performance.

#### **Factors Contributing to Schedule Variance and Projected Effects on Program Schedule**

Due to the unfavorable Schedule Variance trend, the Prime initiated a request for an over target baseline/over target schedule process in April 2023. The Government granted the request with conditions that Northrop Grumman Corporation (NGC) comply with the DoD Over Target Baseline/Over Target Schedule (OTB/OTS) Guide. Due to the magnitude of the project cost and schedule growth, the NGC corporate leadership shall affirm their commitment to complete the NGC Strategic Deterrent Systems Integrated Master Schedule and Cost Estimate at Completion project and delivered products as a strategic priority in Calendar Year 2024.

**(U) Production****(U) Low-Rate Initial Production**

	Original LRIP Determination	Current LRIP Determination
Total LRIP Quantity	211	211
Date	9/4/2020	9/4/2020
Reference	Milestone B ADM	Milestone B ADM
LRIP Period	FY 2026 - 2029	FY 2026 - 2029
Total Procurement Quantity	634	634
LRIP Percentage of Total	33.3%	33.3%

**Rationale if LRIP Quantity Exceeds 10% of Total Procurement Quantity (Current Determination)**

The four LRIP lots will include the equipment and labor needed to deploy, transport, operate, maintain, train, and sustain the Sentinel (GBSD) Weapon System (i.e., spares, training, installation, transportation, support equipment, etc.).

**LRIP Notes**

The current LRIP details are under review and will be adjusted as necessary as part of the Over Target Baseline/Over Target Schedule and Nunn-McCurdy review process.

**(U) Deliveries and Expenditures****(U) Acquisition Funding**

	Total Estimate	Actual to Date	Actual, Percent Complete
Years Appropriated	-	-	-
Appropriations (TY, \$M)	152,413.0	152,413.0	100.0%
Expenditures (TY, \$M)	152,413.0	8,898.9	5.8%

**(U) End Items Delivered**

	Total Required	Planned to Date	Actual to Date	Actual, Percent Complete
Development	25			
GBSD		6	0	
Procurement	634			
Total	659	6	-	-

**Notes**

None



## (U) International Program Aspects

### General Memo

Program will not be designed to support international exportability.

### Exportability and Business Issues

Program will not be designed to support international exportability.

Is design for international exportability planned?	No	Industry/Partner Exportability Cost-Sharing?	No
If not, has the MDA approved an exportability waiver for a U.S.-only design?	Not Applicable		

### Program Protection: Technology Security and Foreign Disclosure Issues

Program will not be designed to support international exportability.

### (U) Agreements

No International Agreements have been defined for LGM-35A Sentinel



UNCLASSIFIED

# **Modernized Selected Acquisition Report Supplement**

**LGM-35A Sentinel  
(LGM-35A Sentinel)**

FY 2025 President's Budget  
As of: December 31, 2023

UNCLASSIFIED

## **MSAR Supplement Sections**

Program Description

Program Use of the Adaptive Acquisition Framework

Technologies and Systems Engineering

Funding Sources (Acquisition)

Funding Sources (Operating and Support)

Acquisition Estimate and Quantity Summary

Annual Acquisition Estimates by Appropriation Account

Acquired System Annual End-Item Quantities by Appropriation Account

Nuclear Costs

Operational Fielding Plan

O&S Independent Cost Estimate

Annual Operating and Support Estimates by Cost Element

## Program Description

**Full Name**

LGM-35A Sentinel

**Short Name**

LGM-35A Sentinel

**PNO**

493

**Lead Component**

Air Force

**AAF Pathway**

MCA

**Acquisition Type**

MDAP

**Acquired Systems**

GBSD

**Related Programs**

<b>Full Name</b>	<b>PNO</b>	<b>Pathway</b>	<b>Type</b>	<b>ACAT/ BCAT</b>	<b>Acquisition Status</b>	<b>Costs in SAR?</b>	
						<b>Acq</b>	<b>O&amp;S</b>
Mk21A Reentry Vehicle	576	MCA	MDAP	IB	Active	No	Yes
Air Force Intercontinental Ballistic Missile Fuze Modernization	498	MCA	MDAP	IC	Active	No	Yes

## **Program Use of the Adaptive Acquisition Framework**

This acquisition is accomplished by a single program in the Major Capability Acquisition Pathway.

## Technologies and Systems Engineering

### LGM-35A Sentinel

#### Major Software Efforts

Title	Status	Fielding Date	Description
Sentinel Software	Design		Total Estimated effort all Computer Software Configuration Items is \$3,119M (TY) the fielding date is to be determined as part of an Over-Target-Baseline/Over-Target-Schedule process initiated by the Prime contractor is FY 2023 and expected to complete in FY 2024. Dates will align with the Integrated Flight Test Matrix, several key mission events, and on through IOC.

#### Major Engineering Changes

Title	Original Need Date	Fielding Date	Description, Rationale and Program Impacts

## Funding Sources (Acquisition)

### Acquisition Funding Notes

#### LGM-35A Sentinel

Category	Account	BA	Line Item	Program Element	RDT&E Project	Shared	Sunk
RDT&E	3600F	07	0101213F - Minuteman Squadrons	0101213F	672987 - ICBM Ops Equipment		x
RDT&E	3600F	05	0604851F - Intercontinental Ballistic Missile - EMD	0604851F	657010 - OCBM - EMD operational equipment		x
RDT&E	3600F	04	0605230F - Ground Based Strategic Deterrent	0605230F	641025 - Ground Based Strategic Deterrent (GBSD)		x
RDT&E	3600F	05	0605238F - Ground Based Strategic Deterrent EMD	0605238F	655238 - Ground Based Strategic Deterrent EMD		
Procurement	3020F	01	MGBSD0 - Ground Based Strategic Deterrent	0101233F	-		
Note: BP20							
Procurement	3020F	04	MGBSD0 -	0101233F	-		
Note: BP26							
Procurement	3080F	03	834130 - Air Force Physical Security System	0101233F	-	x	
Note: BP83							
MILCON	3300F	03	PAYZ210001 - Planning & Design	0101233F	-		
Procurement	3080F	XX	OTHER - Other or New 3080F Line Item	XXX	XXX - --	x	
Note: 845010 Base Procured Equipment 0101233F BP84							
Procurement	3010F	XX	OTHER - Other or New 3010F Line Item	XXX	XXX - --	x	
Note: BA05 Other Aircraft MGBSD10101233F BP11							

## Funding Sources (Operating and Support)

*Note: Budget lines fund activities executed by the Program Office or Sustainment Office.*

### Operating and Support Funding Notes

O&S funding has not yet started and as such, there are no O&S lines of accounting.

### LGM-35A Sentinel

Category	Account	BA	Line Item	Program Element	RDT&E Project	Shared	Sunk
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## Acquisition Estimate and Quantity Summary

### LGM-35A Sentinel

#### Acquisiton Estimates

Category	PB 2025	Current Base Year		Original Base Year		Report Fiscal Year	
		TY (\$M)	CY2020 (\$M)	CY2020 (\$M)	CY2020 (\$M)	CY2024 (\$M)	CY2024 (\$M)
RDT&E		36,001.0	28,893.6	28,893.6	28,893.6	34,173.4	
Procurement		86,355.0	57,665.4	57,665.4	57,665.4	68,202.7	
MILCON		28,705.0	18,950.1	18,950.1	18,950.1	22,412.9	
O&M		1,352.0	917.8	917.8	917.8	1,085.5	
Total Acquisition		152,413.0	106,426.9	106,426.9	106,426.9	125,874.5	
PAUC		231.279	161.498	161.498	161.498	191.008	
APUC		136.207	90.955	90.955	90.955	107.575	

#### Acquisiton End-Item Quantities

System	PB 2025	Development	Procurement
GBSD		25	634
Total		25	634

#### Unit Description

Quantities are based on Aerospace Vehicle Equipment, which consists of a Booster, Guidance, Post-Boost, and Reentry System.

#### Current and Future Years Defense Program Summary, TY(\$M)

Appropriation	Prior	2024	2025	2026	2027	2028	2029	To Complete	Total
RDT&E	8,711.0	3,746.9	3,721.0	3,791.6	3,568.8	2,890.1	2,011.9	7,559.6	36,001.0
Procurement	65.7	543.5	10.9	1,675.2	4,146.4	5,077.1	5,697.8	69,138.5	86,355.0
MILCON	755.2	198.0	770.0	1,109.0	830.0	1,453.0	957.0	22,632.7	28,705.0
O&M	57.4	41.4	46.6	78.0	39.0	35.0	48.0	1,006.7	1,352.0
<b>PB 2025 Total</b>	<b>9,589.4</b>	<b>4,529.8</b>	<b>4,548.5</b>	<b>6,653.7</b>	<b>8,584.2</b>	<b>9,455.2</b>	<b>8,714.7</b>	<b>100,337.6</b>	<b>152,413.0</b>

## Annual Acquisition Estimates by Appropriation Account

(Aligned to Budget Position: PB 2025)

### LGM-35A Sentinel

Source for TY\$-CY\$ Conversion: SAF/FMCE Raw and Weighted Inflation Indices for DAF Accounts: 23 Feb 2024

<b>3600F - Research, Development, Test &amp; Eval, AF</b>					
fiscal year		Other/ Unallocated	Total TY(\$M)	Weighted Rate	Total CY2020 (\$M)
<b>Total</b>		<b>36,001.0</b>	<b>36,001.0</b>	<b>-</b>	<b>28,893.6</b>
2016		46.966	47.0	0.943892	49.8
2017		205.667	205.7	0.963644	213.4
2018		221.534	221.5	0.983901	225.2
2019		401.244	401.2	1.002193	400.4
2020		538.643	538.6	1.027969	524.0
2021		1,397.485	1,397.5	1.076265	1,298.5
2022		2,464.875	2,464.9	1.134002	2,173.6
2023		3,434.623	3,434.6	1.174308	2,924.8
2024		3,746.935	3,746.9	1.204218	3,111.5
2025		3,721.024	3,721.0	1.230062	3,025.1
2026		3,791.551	3,791.6	1.255893	3,019.0
2027		3,568.798	3,568.8	1.282267	2,783.2
2028		2,890.117	2,890.1	1.309194	2,207.6
2029		2,011.934	2,011.9	1.336688	1,505.2
2030		2,628.185	2,628.2	1.364758	1,925.8
2031		2,742.449	2,742.4	1.393418	1,968.1
2032		2,188.970	2,189.0	1.422680	1,538.6

## Annual Acquisition Estimates by Appropriation Account

(Aligned to Budget Position: PB 2025)

### LGM-35A Sentinel

Source for TY\$-CY\$ Conversion: SAF/FMCE Raw and Weighted Inflation Indices for DAF Accounts: 23 Feb 2024

3010F - Aircraft Procurement, Air Force									
fiscal year	End Item Recurring Flyaway	Non-End Item Recurring Flyaway	Non-Recurring Flyaway	Initial Spares	Depot Activation	Other/ Unallocated	Total TY(\$M)	Weighted Rate	Total CY2020 (\$M)
<b>Total</b>	<b>49.0</b>	-	-	<b>5.0</b>	-	-	<b>54.0</b>	-	<b>40.7</b>
2016							-	0.972108	-
2017							-	0.992454	-
2018							-	1.021385	-
2019							-	1.056821	-
2020							-	1.101508	-
2021						-	-	1.148644	-
2022						-	-	1.186534	-
2023						-	-	1.215807	-
2024						-	-	1.240310	-
2025	5.216					-	5.2	1.266486	4.1
2026	13.000	-		5.031			18.0	1.293082	13.9
2027	14.549						14.5	1.320237	11.0
2028	3.295						3.3	1.347962	2.4
2029	-						-	1.376269	-
2030	9.274						9.3	1.405171	6.6
2031	3.635						3.6	1.434679	2.5

## Annual Acquisition Estimates by Appropriation Account

(Aligned to Budget Position: PB 2025)

### LGM-35A Sentinel

Source for TY\$-CY\$ Conversion: SAF/FMCE Raw and Weighted Inflation Indices for DAF Accounts: 23 Feb 2024

3020F - Missile Procurement, Air Force									
fiscal year	End Item Recurring Flyaway	Non-End Item Recurring Flyaway	Non- Recurring Flyaway	Initial Spares	Depot Activation	Other/ Unallocated	Total TY(\$M)	Weighted Rate	Total CY2020 (\$M)
<b>Total</b>	<b>36,510.7</b>	<b>31,447.0</b>	<b>5,731.7</b>	<b>938.8</b>	<b>2,411.6</b>	<b>9,061.2</b>	<b>86,101.0</b>	<b>-</b>	<b>57,468.9</b>
2016							-	0.966224	-
2017							-	0.990782	-
2018							-	1.015498	-
2019							-	1.045073	-
2020							-	1.085685	-
2021							-	1.134683	-
2022	8.895			2.000			10.9	1.177298	9.3
2023						-	-	1.207673	-
2024	488.300	30.000		13.000		8.000	539.3	1.234654	436.8
2025	-					-	-	1.260762	-
2026	895.943	460.667	117.887	23.577	18.136	117.887	1,634.1	1.287238	1,269.5
2027	1,466.921	1,314.796	461.808	38.031	632.949	217.322	4,131.8	1.314270	3,143.8
2028	3,096.690	1,007.847	247.898	79.246	263.137	378.959	5,073.8	1.341869	3,781.1
2029	3,178.981	1,108.482	321.782	81.000	353.960	653.550	5,697.8	1.370049	4,158.8
2030	2,750.108	1,205.047	319.012	71.003	221.009	646.025	5,212.2	1.398820	3,726.1
2031	3,173.440	2,296.318	338.047	81.011	184.025	665.092	6,737.9	1.428195	4,717.8
2032	2,925.917	2,343.933	351.990	74.998	167.995	679.981	6,544.8	1.458187	4,488.3
2033	3,040.460	2,689.522	358.936	77.986	198.965	666.881	7,032.8	1.488809	4,723.7
2034	3,144.861	2,929.869	394.982	80.996	156.993	670.970	7,378.7	1.520074	4,854.2
2035	2,919.679	2,907.681	374.959	74.992	111.988	575.937	6,965.2	1.551995	4,487.9
2036	2,659.977	2,722.976	382.997	67.999	56.999	625.994	6,516.9	1.584587	4,112.7
2037	2,632.279	3,151.135	384.894	67.981	28.992	537.852	6,803.1	1.617864	4,205.0
2038	2,232.663	3,213.957	415.124	57.017	12.004	527.157	6,457.9	1.651839	3,909.5
2039	1,539.175	2,956.334	358.040	39.004	4.000	523.059	5,419.6	1.686527	3,213.5
2040	276.380	576.872	64.509	7.007	0.412	108.614	1,033.8	1.721944	600.4
2041	21.982	531.564	226.814	0.999	-	480.605	1,262.0	1.758105	717.8
2042	58.004	-	612.038	1.000	-	489.030	1,160.1	1.795025	646.3
2043	-	-	-	-	-	488.302	488.3	1.832721	266.4

## Annual Acquisition Estimates by Appropriation Account

(Aligned to Budget Position: PB 2025)

### LGM-35A Sentinel

Source for TY\$-CY\$ Conversion: SAF/FMCE Raw and Weighted Inflation Indices for DAF Accounts: 23 Feb 2024

3080F - Other Procurement, Air Force									
fiscal year	End Item Recurring Flyaway	Non-End Item Recurring Flyaway	Non-Recurring Flyaway	Initial Spares	Depot Activation	Other/ Unallocated	Total TY(\$M)	Weighted Rate	Total CY2020 (\$M)
<b>Total</b>	-	<b>200.0</b>	-	-	-	-	<b>200.0</b>	-	<b>155.8</b>
2016							-	0.943169	-
2017							-	0.961304	-
2018							-	0.982571	-
2019							-	1.002169	-
2020							-	1.021213	-
2021							-	1.059847	-
2022							-	1.123380	-
2023		54.839					54.8	1.168142	46.9
2024		4.172					4.2	1.197063	3.5
2025		5.689					5.7	1.223085	4.7
2026		23.040					23.0	1.248769	18.5
2027							-	1.274994	-
2028							-	1.301768	-
2029		-					-	1.329106	-
2030		83.662					83.7	1.357017	61.7
2031		27.278					27.3	1.385514	19.7
2032		0.858					0.9	1.414610	0.6
2033		-					-	1.444317	-
2034		-					-	1.474647	-
2035		0.226					0.2	1.505615	0.2
2036		-					-	1.537233	-
2037		0.236					0.2	1.569515	0.2

**Annual Acquisition Estimates by Appropriation Account**

(Aligned to Budget Position: PB 2025)

**LGM-35A Sentinel**

Source for TY\$-CY\$ Conversion: SAF/FMCE Raw and Weighted Inflation Indices for DAF Accounts: 23 Feb 2024

<b>3300F - Military Construction, Air Force</b>					
<b>fiscal year</b>		<b>Other/ Unallocated</b>	<b>Total TY(\$M)</b>	<b>Weighted Rate</b>	<b>Total CY2020 (\$M)</b>
<b>Total</b>		<b>28,705.0</b>	<b>28,705.0</b>	<b>-</b>	<b>18,950.1</b>
2016			-	0.984574	-
2017			-	1.007462	-
2018		-	-	1.031659	-
2019		-	-	1.063463	-
2020	-	40.000	40.0	1.109832	36.0
2021	-	89.200	89.2	1.158814	77.0
2022	-	168.099	168.1	1.195659	140.6
2023	-	457.920	457.9	1.223991	374.1
2024	-	198.040	198.0	1.249679	158.5
2025		770.000	770.0	1.275962	603.5
2026		1,109.000	1,109.0	1.302757	851.3
2027		830.000	830.0	1.330115	624.0
2028		1,453.000	1,453.0	1.358048	1,069.9
2029		957.000	957.0	1.386567	690.2
2030		786.738	786.7	1.415685	555.7
2031		2,089.709	2,089.7	1.445414	1,445.8
2032		2,001.913	2,001.9	1.475768	1,356.5
2033		2,313.630	2,313.6	1.506759	1,535.5
2034		2,203.132	2,203.1	1.538401	1,432.1
2035		2,624.871	2,624.9	1.570707	1,671.1
2036		1,950.188	1,950.2	1.603692	1,216.1
2037		2,254.223	2,254.2	1.637370	1,376.7
2038		1,923.194	1,923.2	1.671754	1,150.4
2039		1,954.078	1,954.1	1.706861	1,144.8
2040		1,502.777	1,502.8	1.742705	862.3
2041		1,028.288	1,028.3	1.779302	577.9

## Annual Acquisition Estimates by Appropriation Account

(Aligned to Budget Position: PB 2025)

### LGM-35A Sentinel

Source for TY\$-CY\$ Conversion: SAF/FMCE Raw and Weighted Inflation Indices for DAF Accounts: 23 Feb 2024

<b>3400F - Operation &amp; Maintenance, Air Force</b>					
fiscal year		Other/ Unallocated	Total TY(\$M)	Weighted Rate	Total CY2020 (\$M)
<b>Total</b>		<b>1,352.0</b>	<b>1,352.0</b>	<b>-</b>	<b>917.8</b>
2016			-	0.944745	-
2017			-	0.964472	-
2018			-	0.986310	-
2019			-	1.003989	-
2020			-	1.033919	-
2021		3.404	3.4	1.080859	3.1
2022		17.922	17.9	1.137401	15.8
2023		36.047	36.0	1.175775	30.7
2024		41.369	41.4	1.207567	34.3
2025		46.557	46.6	1.233365	37.7
2026		78.000	78.0	1.259266	61.9
2027		39.000	39.0	1.285711	30.3
2028		35.000	35.0	1.312711	26.7
2029		48.000	48.0	1.340278	35.8
2030		62.362	62.4	1.368423	45.6
2031		41.437	41.4	1.397160	29.7
2032		75.088	75.1	1.426501	52.6
2033		75.593	75.6	1.456457	51.9
2034		75.669	75.7	1.487043	50.9
2035		75.930	75.9	1.518271	50.0
2036		75.181	75.2	1.550154	48.5
2037		75.533	75.5	1.582708	47.7
2038		75.985	76.0	1.615944	47.0
2039		75.636	75.6	1.649879	45.8
2040		75.594	75.6	1.684527	44.9
2041		75.104	75.1	1.719902	43.7
2042		75.253	75.3	1.756020	42.9
2043		72.336	72.3	1.792896	40.3

## Acquired System Annual End-Item Quantities by Appropriation Account

(Aligned to Budget Position: PB 2025)

### LGM-35A Sentinel

3600F - Research, Development, Test & Eval, AF				
fiscal year	GBSD			Total
<b>Total</b>	<b>25</b>			<b>25</b>
Undistributed				-
2021	1			1
2022	3			3
2023	4			4
2024	5			5
2025	6			6
2026	6			6



## Acquired System Annual End-Item Quantities by Appropriation Account

(Aligned to Budget Position: PB 2025)

### LGM-35A Sentinel

fiscal year	GBSD			Total
<b>Total</b>	<b>634</b>			<b>634</b>
Undistributed				-
2021				-
2022				-
2023				-
2024				-
2025				-
2026				-
2027				-
2028	42			42
2029	43			43
2030	45			45
2031	56			56
2032	56			56
2033	56			56
2034	56			56
2035	56			56
2036	56			56
2037	56			56
2038	56			56
2039	56			56

## **Nuclear Costs**

### **LGM-35A Sentinel**

#### **Program's Use of Department of Energy Resources**

None

## Operational Fielding Plan

### LGM-35A Sentinel

*Some data for this section cannot be provided in an unclassified report*

#### System:

#### Fielding and Inventory Notes

This Program's Operational Fielding plan contains Controlled Unclassified Information (CUI) and has been removed per the Implementation Plan for the DoD's Modernized Selected Acquisition Report Process, dated June 2023, which required the MSAR be submitted without any designation relation to dissemination control.

#### Fielding Plan and Inventory

fiscal year	Store	Field	Expend/Loss	Decommission	Inventory
2023					
2024					-
2025					-
2026					-
2027					-
2028					-
2029					-

## O&S Independent Cost Estimate

### LGM-35A Sentinel

#### Independent and Current Cost Estimate Comparison

Category	CY2020 (\$M)	Independent Cost Estimate 7/22/2020	Current Estimate 12/7/2023	Variance with ICE (%)
Unit-Level Manpower				-
Unit Operations				-
Maintenance				-
Sustaining Support				-
Continued System Improvements				-
Other				-
<b>Total O&amp;S</b>		-	-	-

#### Independent Cost Estimate Source

Event: Milestone B  
 Type: Independent Cost Estimate  
 Approved by: OSD Cost Assessment & Program Evaluation, July 22, 2020

#### Current Cost Estimate Source

Type: Program Office Estimate  
 Approved by: AFNWC Cost Chief , December 7, 2023

#### Cost Estimate Variance Explanation

This Program's Operating and Support Costs is Controlled Unclassified Information (CUI) and has been removed per the Implementation Plan for the DoD's Modernized Selected Acquisition Report Process, dated June 2023, which required the MSAR be submitted without any designation relation to dissemination control.

## Annual Operating and Support Estimates by Cost Element

### LGM-35A Sentinel

#### System: GBSD

Source for TY-CY Conversion:

Operating and Support Cost Elements							
fiscal year	1.0 Unit-Level Manpower	2.0 Unit Operations	3.0 Maintenance	4.0 Sustaining Support	5.0 Continuing System Improvements	Other	Total CY2020 (\$M)
<b>Total</b>	-	-	-	-	-	-	-
2026							-
2027							-
2028							-
2029							-
2030							-
2031							-
2032							-
2033							-
2034							-
2035							-
2036							-
2037							-
2038							-
2039							-
2040							-
2041							-
2042							-
2043							-
2044							-
2045							-
2046							-
2047							-
2048							-
2049							-
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